Extent of sight distance reductions caused by Rainfall on single carriageway roads

Abstract

The paper is aimed at probing the extent of sight distance reductions along a single carriageway road caused rainy conditions. Stopping and passing sight distances were investigated under dry weather, light, moderate and heavy rainy condition. Rainfall intensities being; light < 2.5 mm/h, moderate 2.5-10 mm/h and heavy 10-50 mm/h were based on Malaysian meteorology classification system. Based on the hypothesis that rainfall irrespective of intensity has significant effect on roadway visibility and by extension sight distance reductions, impact studies were carried out at two locations at Terengganu, Malaysia. Continuous traffic volume, speed, vehicle types and headway data were collected for 8 weeks, collated and analysed. Results show about 17% reduction in average stopping and passing sight distances due to rainfall. The paper concluded that irrespective of their intensities rainfalls have significant impact on sight distances.